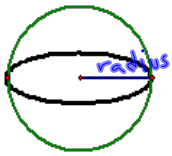
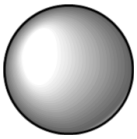
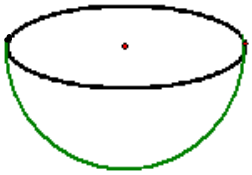
9-6 Area and Volume of Spheres

sphere-the set of all points in space that are the same distance from a point







Hemisphere

$SA = 4\pi r^2$

$V = \frac{4}{3}\pi r^3$

Find the area and volume of a sphere with radius = 7cm.

$SA = 4\pi 7^2$

$4 \cdot \pi \cdot 49$

$196\pi \text{ cm}^2$

$V = \frac{4}{3}\pi 7^3$

$7 \cdot 7 \cdot 7$

$7^3 = 343$

$343 \times 4 \div 3$

$457.3\pi \text{ cm}^3$

$SA = 4\pi r^2$

$V = \frac{4}{3}\pi r^3$

Find the volume of a sphere with radius = 9cm.

$V = \frac{4}{3}\pi 9^3$

$729 \times 4 \div 3$

$972\pi \text{ cm}^3$

~~$SA = 4\pi r^2$~~ Sphere

$V = \frac{4}{3}\pi r^3$

Find the volume of a hemisphere with radius = 10cm.

$\div 2$

$\frac{4}{3}\pi 10^3$

$1000 \times 4 \div 3$

Hemisphere

$\div 2$

$\div 2$

$666.6\pi \text{ cm}^3$